Recreational Use Attainability Analysis

for

Missouri WBID#0654 North Fork Blackbird Creek

Prepared for:

UAA Review Committee
Missouri Department of Natural Resources
Water Protection Program
1101 Riverside Drive
Jefferson City, MO 65101

Submitted by: Benton & Associates, Inc. 713 North High Street Kirksville, MO 63501



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TOPOGRAPHIC LOCATION MAP, FIELD DATA SHEETS, SUPPLEMENTAL NARRATIVES, AND FIELD PHOTOGRAPHS

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Purpose:

North Blackbird Creek was evaluated in response to changes in State Clean Water Regulations. The new regulations will classify all waterways in the State of Missouri that have not been evaluated as fishable and swimable. At the request of the Lake Thunderhead Wildflower Community Association, an evaluation was completed on North Blackbird Creek to determine if there is existing or attainable use of the stream.

Area of Evaluation:

The area evaluation on North Blackbird Creek was between the spillway of Lake Thunderhead west of State Highway 5 and the road crossing of State Highway 129. The length of the segment evaluated was 3+/- miles. The segment was evaluated on the upstream and downstream sides of three road crossings. The crossings were at State Highway 5, County Road 127, and State Highway 129.

Method:

The Use Attainability Analysis (UAA) Protocol as issued from Missouri DNR was utilized for the evaluation. The field data sheets were used for identifying the stream and the evaluation of the existing or attainable recreational use of North Blackbird Creek. The UAA protocol was also utilized in developing the list of questions for interviews of property owners adjacent to the North Blackbird Creek

Results:

The following information is located in appendices contained herein:

- ∉ Appendix "A" Field Data Sheets and supporting photos and narratives for the three (3) stream crossings evaluated.
- Appendix "B" Written responses and contact information for the three (3) property Owners interviewed adjacent to the stream.

Due to the ephemeral nature of the northernmost stretch of North Blackbird Creek, our assessment is that the segment evaluated prevents the attainment of use. Since Lake Thunderhead is strictly a recreational lake, during peak

use season (April through October), the manager of the lake retains as close to normal pool as is possible. The lake discharges water only when there is rain or sufficient snow melt. The only portion of the assessed length that even approached useable depth was made that way by a low head dam used for the watering of livestock. All three locations evaluated showed virtually no sign of human presence. All three interviews with persons living and/or owning ground adjacent to North Blackbird Creek confirmed that they did not use the creek for swimming, fishing, trapping, or any recreational activity.

APPENDIX "A"

2000 JULY 14 PH 3: 01

Data Sheet A - Water Body Identification

Water Body Name: (from USGS 7.5' quad) North Blackbird Creek
8-digit HUC: 10280201
Missouri WBID #: 0654
County: Putnam
Upstream Legal Description: Intersection of North Blackbird Creek and State Highway 5
Downstream Legal Description: Intersection of North Blackbird Creek and State Highway 129
Upstream Coordinates: -93°00'57" 40°31'46"
Downstream Coordinates: -92°57'48" 40°30'13" (UGS 84, ddd.ddddd)
Discharger Facility Name(s): Wildflower Community Association
Discharger Permit Number(s): MO0057215
Number of Sites Evaluated: 3
Name of Surveyor and Telephone Number: Lee Bloome 660-665-3575
Organization: Benton & Associates, Inc.
Position: Civil Engineer, P.E.

I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UAA datasheet is true and accurate.

Signed:	L	1/2 lone	Let Become Date:	7/13/05	
					-

Data Sheet B - Site Characterization

(A separate data sheet must be completed for each site)

Missouri WBID #: 065	4-0100	•		Site Location Description: State Highway 5				
Site GPS Coordinates:	93°00'57", 40°31'46		State Highwa	State riighway s				
Date & Time: July 8, 2	005 11:00	-	Facility Name	Facility Name: Wildflower Community Association				
Personnel: Lee Bloome			Permit Numb	Permit Number: MO0057215				
Current Weather Condit	tions: Sunny, 91°		Weather Con	Weather Conditions for Past 7 days: Sunny, Dry, 90° S				
Photo Ids: Upstream: 5	See Attached Do	wnstream: S	ee Attached O	Attached Other: Location identified as 0100				
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es Observed*:			·		1			
☐ Swimming	☐ Skin diving	0	CUBA diving	☐ Tubing	☐ Water skiing			
☐ Wind surfing	☐ Kayaking	D H	Boating	□ Wading	☐ Rafting			
☐ Hunting	☐ Trapping	□ F	ishing	✓ None of the above	□ Other:			
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rrounding Conditions of interest.)	ns*: (Mark all that	promote or i	impede recreations	al uses. Attach photos of evide	nce or unusual			
rrounding Conditions of interest.)	ns*: (Mark all that	promote or i	mpede recreations conservation lands al forests	ul uses. Attach photos of evide	nce or unusual Campgrounds Stairs/walkway			
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rrounding Conditions of interest.) City/county parks Boating accesses No trespass sign	ns*: (Mark all that Playgrounds State parks Fence	promote or i	mpede recreations conservation lands al forests	al uses. Attach photos of evide Urban areas Nature trails	nce or unusual Campgrounds Stairs/walkway			
rrounding Conditions of interest.) City/county parks Boating accesses No trespass sign idence of Human Us	ns*: (Mark all that Playgrounds State parks Fence	promote or i	impede recreations conservation lands al forests lopes	al uses. Attach photos of evide Urban areas Nature trails Other: See Attached	nce or unusual Campgrounds Stairs/walkway			

Site Locations Map(s): Attach a map of entire segment with assessment sites clearly labeled. Mark any other items that may be of interest. (Include photographs)

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^{*}Some of this information is not intended to directly influence a decision on any one particular recreational use analysis but may point to conditions that need further analysis or that effect another use.

Page Two – Data Sheet B for WBID $\#_{0654-0100}$:

	h (ft): 12'	Length (ft): 15'	j	Avg. Depth ((ft): ^{0.1}	Max. Depth	(ft): 0.2
□ Run Widt	h (ft):	Length (ft):	1	Avg. Depth ((ft):	Max. Depth	(ft):
⊘ Pool Widt	h (ft): 25'	Length (ft): 30	00'	Avg. Depth ((ft): 2.5'	Max. Depth	(ft): 3'
Flow Pres	ent? 🗆 Yes	i ☑ No		Estimated (ft	³ /sec):	· · · · · · · · · · · · · · · · · · ·	
Downstream V	iew Physica	l Dimensions:					
☑ Riffle Wide	h (ft):	Length (ft):		Avg. Depth ((ft) :	Max. Depth	(ft):
□ Run Wide	h (ft):	Length (ft):	7	Avg. Depth ((ft) :	Max. Depth	(ft):
☑ Pool Wide	h (ft): 18'	Length (ft): 13	0 /	Avg. Depth ((ft): 1.7'	Max. Depth	(ft): 2.5'
☑ Flow Prese	ent? 🛮 Yes	i □ No	I	Estimated (ft	³ /sec); 0.45 ft³/s	sec	
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	n*: (note ame	ount of vegetation or	algal growt	<u>-</u>		70 Hwa Ciay	74 Bedie
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APPENDIX "A"

Location 1: State Highway 5 Bridge Crossing

The first location was adjacent to the Wildflower Community Association's wastewater treatment plant outfall. Photos were taken upstream (Photo 0100-A) and downstream (Photo 0100-B) The outfall is located at the toe of the Lake Thunderhead dam. The upstream was a pool that was created by a low water vehicle crossing on the downstream side of the Highway (Photo 0100-B). The low head vehicle crossing was also being used for livestock watering. The water was $2\frac{1}{2}$ to 3 feet deep from the box culvert to approximately 300 ft upstream (Photo 0100-C). The stream was channelized and the banks were steep and inaccessible. There was no evidence of any recreational activity on the upstream or downstream side. The downstream side was fenced off Photo 0100-C). The water was stagnant and had excessive algal growth (Photo 0100-F). There was a 16" carp dead at the low water crossing. A muskrat was spotted in the pool on the upstream side. Since the stream essentially starts at the toe of the dam, there are fish in the upstream pool that are flushed through the dam's overflow and become trapped in the pool at the toe of the dam. The downstream pool had evidence of livestock watering. There were hoof prints to the water's edge.

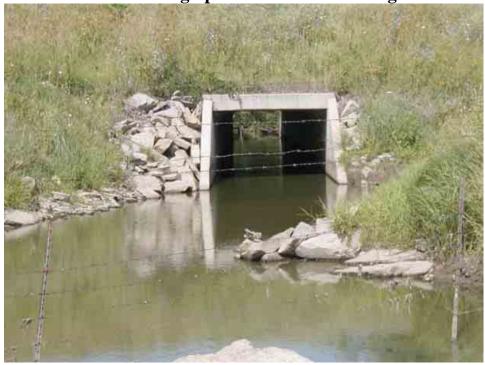




Photo 0100-B: Downstream of Highway 5. Low water vehicle crossing visible.



Photo 0100-C: Looking upstream. Fence in foreground.





Data Sheet B - Site Characterization

(A separate data sheet must be completed for each site)

	Missouri WBID #: 0654	•	Site Location Description: County Highway 127							
	Site GPS Coordinates: 9		County High	nway	127					
	Date & Time: July 8, 20	05 12:00			Facility Name: Wildflower Community Association					
	Personnel: Lee Bloome						Permit Number: MO 0057215			
	Current Weather Condition		Weather Conditions for Past 7 days: Sunny, Dry, 90° S							
	Photo lds: Upstream: Se	am: See	attached (Other:	Location identified as 010	01				
Us	es Observed*:									
	☐ Swimming	☐ Skin divi	ng	□ scu	JBA diving		☐ Tubing	☐ Water skiing		
	☐ Wind surfing	☐ Kayaking	3	□ Boa	ting		☐ Wading			
	☐ Hunting	☐ Trapping	,	☐ Fish	ing		☑ None of the above	☐ Other:		
	rrounding Condition	S*: (Mark all	that prome	te or imp	oede recreation	onal uso	es. Attach photos of evider	ace or unusual		
	☐ City/county parks	☐ Playgrous	nds 🗆 N	MDC con	servation land	ds	☐ Urban areas	☐ Campgrounds		
	☐ Boating accesses	☐ State park	ks 🗆 N	National 1	forests		☐ Nature trails	☐ Stairs/walkway		
	□ No trespass sign	☑ Fence	Ø \$	teep slop	pes					
Ev	idence of Human Use	2*:								
	□ Roads	☐ Foot path	s/prints	□ D ₄	ock/platform		☐ Livestock Watering	☐ RV / ATV Tracks		
	☐ Rope swings	☐ Camping	Sites	☐ Fi	re pit/ring		☐ NPDES Discharge	☐ Fishing Tackle		
	☐ Other: NONE					-				
										

Site Locations Map(s): Attach a map of entire segment with assessment sites clearly labeled. Mark any other items that may be of interest. (Include photographs)

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Page Two - Data Sheet B for WBID # 0654-0101:

	th (ft):4.5		Lengtl	h (ft): 3	A	Avg. Depth	(ft): 0.15	Max. Depth	(ft): 0.1	
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	lth (ft): 11			h (ft): 305		Avg. Depth		Max. Depth	(ft): 1.2	
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Location 2: County Road 127

The second location was a bridge located at the intersection of North Blackbird Creek and County Highway 127. Photos were taken upstream (Photo 0101-A) and downstream (Photo 0101-B). The creek is lined by steep banks and trees (Photo 0101-C and D). On the upstream side, there was fence on both sides of the creek. The creek had a sand and gravel bottom. There was no evidence of human activity. The water was relatively clear and flowing. There was a stretch of orange algae on one of the banks near a dry run entering the creek. There was evidence of deer and raccoons along the creek. An adjacent property Owner was interviewed during the survey (See Appendix "B")





Photo 0101-B: Downstream of County Highway 127



Photo 0101-C: Photo of the Steep Bank south side of creek



Photo 0101-D: Photo of the Steep Bank north side of creek



Data Sheet B - Site Characterization

(A separate data sheet must be completed for each site)

Missouri 1	Missouri WBID #: 0654-0102					Site Location Description:				
Site GPS	Site GPS Coordinates: 92°57'48", 40°30'13"					State Highway 129				
Date & Ti	Date & Time: July 8, 2005 1:00 pm					Facility Name: Wildflower Community Association				
Personnel	Personnel: Lee Bloome					Permit Number: MO 0057215				
Current W	Current Weather Conditions: Sunny, 91°					Weather Conditions for Past 7 days; Sunny, Dry, 90° S				
Photo Ids:	Photo Ids: Upstream: See attached Downstream: See					Other:	Location identified as 010)2		
	•1						· · ·			
Uses Obser							· · · · · · · · · · · · · · · · · · ·	<u> </u>		
Swimm	ning	☐ Skin divi	ng	□ SC	JBA diving		☐ Tubing	☐ Water skiing		
☐ Wind :	surfing	☐ Kayaking	<u> </u>	☐ Boa	ting		.□ Wading	☐ Rafting		
_ ☐ Huntin		☐ Trapping		☐ Fish			☑ None of the above locumentation of evidence	☐ Other;		
Surroundin		S*: (Mark all	that prome	te or imp	oede recreatio	onal us	es. Attach photos of evide	ace or unusual		
	ounty parks	□ Playgrou	nds 🗆 🗅 N	MDC cor	servation lar	nds	☐ Urban areas	☐ Campgrounds		
☐ Boatin	g accesses	☐ State par.	ks ¡□1	Vational :	forests		☐ Nature trails	☐ Stairs/walkway		
☐ No tres	spass sign	☐ Fence	2 S	teep slop	oes		Other:			
Evidence of	Human Use	e*:								
☐ Roads		☑ Foot path	s/prints *	□ De	ock/platform		☐ Livestock Watering	□ RV / ATV Tracks		
☐ Rope s	wings	☐ Camping	Sites	□ Fi	re pit/ring		☐ NPDES Discharge	☐ Fishing Tackle		
☐ Other:										
*Single fresh	disturbance o	f orass and	veeds No	worn to	ail					

Site Locations Map(s): Attach a map of entire segment with assessment sites clearly labeled. Mark any other items that may be of interest. (Include photographs)

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Page Two – Data Sheet B for WBID $\#_{\underline{}0654-0102}$:

Ø Run □ Pool	Width (I	t):	Length (ft):	Avg. Dep	oth (ft):	Max. Depth (ft):	
□ Pool	Width (1	t); 4	Length (ft): 100	Avg. Det	oth (ft); 0.21	Max. Depth (ft):	1.1
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☑ Flow	Present?	✓ Yes	□ No	Estimate	d (ft³/sec); 0.78 ft	³/sec	
) Ownstre	am Vie	v Physical	Dimensions:				
□ Riffle	Width (1	t):	Length (ft):	Avg. Dep	oth (ft):	Max. Depth (ft):	
☑ Rụn	Width (i	t): 6	Length (ft): 225	Avg. Dep	oth (ft): 0.21	Max. Depth (ft):	0.45
□ Pool	Width (1	t):	Length (ft):	Avg. Dep	oth (ft):	Max. Depth (ft):	
☑ Flow	Present?	☑ Yes	□ No	Estimated	d (ft ³ /sec): 0.78ft ³	-sec	<u></u> .
%	6 Cobble	10 %	dd up to 100%.) Gravel (6) ont of vegetation or a	5 % Sand	% Silt	25 % Mud/Clay	% Bedroc
			all that apply.)				
		<u> </u>	 -			Other;	
					-	Other:	
Bottom De	<u> </u>		☐ Solids	☑ Fine sedimen		☐ Other:	
	posit:	□ Oil	□ Scum	☐ Foam	None	☐ Other:	
ter Char: Odor: Color: Bottom De	posit:	ics*: (Mark a □ Sewage ☑ Cicar □ Sludge □ Oil	☐ Musky ☐ Green ☐ Solids	☐ Chemical ☐ Gray ② Fine sedimen ☐ Foam	✓ None ☐ Milky ts ☐ None ✓ None	☐ Other:	-

Location 3: State Highway 129

The third location examined was located at the intersection of North Blackbird Creek and Highway 129. Photos were taken upstream (Photo 0102-A) and downstream (Photo 0102-B). The stream crossing was situated at a clearing in the timber. The stream banks were very steep (Photo 0102-C and D). The creek was difficult to access. There was no sign of human presence except for a single fresh trail through the weeds and a single row of footprints on the downstream sandbar. There was another patch of orange algae on the downstream eastern bank. There were minnows and frogs present in a small pool under the bridge.

Photo 0102-A: Upstream of Highway 129

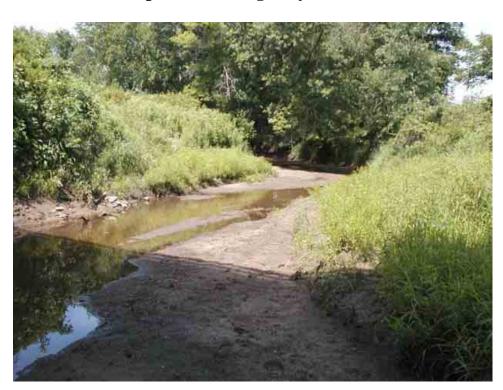


Photo 0102-B: Downstream of County Highway 129



Photo 0102-C: Photo of the steep bank north side of creek



Photo 0102-D: Photo of the steep bank south side of creek



Appendix "B" Property Owner Interviews North Blackbird Creek

Katey Gingerich 14029 30th Rd. Unionville, MO 63565 (Did not have phone)

Ms. Gingerich was interviewed on July 8 after the evaluation of the County Highway 127 crossing. Their home is approximately 200 ft from North Blackbird Creek. They have a pasture that borders the creek, but that is fenced off at the top of bank. Ms. Gingerich stated that they do not use the creek for any activity. They do not swim, fish, trap, or wade in the creek.

Roger Pearson (Sharron) 34942 State Highway W Unionville, MO 63565 660-947-2356

Mr. & Mrs. Pearson's property is located northwest of State Highway 129. North Blackbird Creek runs through their land. Mrs. Pearson was contacted by phone on July 12, 2005 and stated that the ground is planted in trees as part of a conservation project. She also stated that they do not fish, swim, trap or wade in the creek.

Randall Griswold 16528 300th Rd. Unionville, MO 63565 660-947-2980

Mr. Griswold's property is located east of State Highway 5. North Blackbird Creek runs through his land.

Mr. Griswold was contacted by phone on July 12, 2005 and stated that the only activity that occurs in the creek is the watering of livestock. He stated that he does not swim, fish, trap or wade in the creek.

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